

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn) A fixing device using induction heating for causing alternating current to pass through an electromagnetic induction coil, which is arranged so as to be close to an endless member having a metal layer of a conductive material, to cause said endless member to generate heat to heat a member to be fixed, wherein going and returning portions of one turn of said coil are spaced from each other by a predetermined distance or more so as to inhibit electromagnetic fields formed by said going and returning portions from being canceled out.

2. (Withdrawn) A fixing device using induction heating as set forth in claim 1, wherein said coil is wound as a multiplex winding, and going and returning portions of the innermost turn of said coil are spaced from said predetermined distance or more.

3. (Withdrawn) A fixing device using induction heating as set forth in claim 1, wherein said endless member is a roller.

4-6. (Cancelled)

7. (Withdrawn) A fixing device using induction heating for causing alternating current to pass through an electromagnetic induction coil, which is arranged so as to be close to an endless member having a metal layer of a conductive material, to cause said endless member to generate heat to heat a member to be fixed, wherein said coil is wound as a multiplex winding so as to extend in axial directions of said endless member, and a gap between an inside turn of said coil and an object induction-heated by said inside turn of said coil is set to be substantially uniform even in both a central portion and an end portion of said coil.

8. (Withdrawn) A fixing device using induction heating as set forth in claim 7, wherein said endless member is a roller.

9. (Withdrawn) A fixing device using induction heating for causing alternating current to pass through an electromagnetic induction coil, which is arranged so as to be close to an endless member having a metal layer of a conductive material, to cause said endless member to generate heat to heat a member to be fixed, wherein said coil is wound as a multiplex winding so as to extend in axial directions of said endless member, and a heat generation distribution of an object to be heated is optimized by changing distances between the outermost turn of said coil and other turns thereof inward of a core.

10. (Withdrawn) A fixing device using induction heating as set forth in claim 9, wherein said endless member is a roller.

11. (Withdrawn) A fixing device using induction heating for causing alternating current to pass through electromagnetic induction coils, which are arranged so as to be close to an endless member having a metal layer of a conductive material, to cause said endless member to generate heat to heat a member to be fixed, wherein said coil is wound so as to extend in axial direction of said endless member, and a turn of said coil next to a certain turn thereof is sequentially wound onto the outside of said certain turn, said certain turn having a U-turn portion, at least a part of which is bent so as to have a radius R of curvature, and wherein a relationship between said radius R and a distance D between going and returning portions of said certain turn is set to be a predetermined relationship.

12. (Withdrawn) A fixing device using induction heating as set forth in claim 11, wherein said relationship between said radius R and said distance D is $R < D/2$.

13. (Withdrawn) A fixing device using induction heating as set forth in claim 11, wherein said relationship is satisfied with respect to at least one turn of said coil.

14. (Withdrawn) A fixing device using induction heating as set forth in claim 11, wherein said relationship is satisfied with respect to at least one end portion of bent portions of said coil in both ends of said core.

15. (Withdrawn) A fixing device using induction heating as set forth in claim 11, wherein said certain turn of said coil has a U-turn portion in an end portion thereof, said U-turn portion being bent so as to have two radii R of curvature at corners thereof, and said radii R meets said predetermined relationship.

16. (Withdrawn) A fixing device using induction heating as set forth in claim 11, wherein said endless member is a roller.

17-27 (Cancelled)

28. (New) A fixing device comprising:
a heating roller made of a magnetic metal;
a coil comprising a plurality of twisted wire rods;
an exciting circuit that applies a high-frequency current to the coil;
a core, comprising a heat resistant resin, arranged inside the heating roller,
wherein the core further comprises at least two grooves, each of the grooves being formed on a surface of the core in the vicinity of each of two end portions thereof, and
wherein the coil is wound on the core longitudinally, and parts of the coil are buried in the grooves so that a distance between the outer most part of the coil wound on the core and the inner surface of the heating roller is constant.

29. (New) A fixing device as set forth in claim 28, wherein the two end portions of the coil, which serve as outgoing line portions of the coil going and returning to the core, are taken out of the core with the two end portions being attached to each other.

30. (New) A fixing device as set forth in claim 29, wherein the two end portions are parallel to each other.

31. (New) A fixing device as set forth in claim 29, wherein the two end portions are twisted.

32. (New) A fixing device as set forth in claim 29, wherein the coil is formed of an insulating wire.

33. (New) A fixing device as set forth in claim 29, wherein the coil is formed of a double insulating wire.